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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,360	07/07/2003	Raymond Martin Johnson	60680-706	7895
7590 10/13/2005			EXAMINER	
DYKEMA GOSSETT PLLC			PHAN, THIEM D	
Ste. 300			ART UNIT	
39577 Woodward Ave.			PAPER NUMBER	
Bloomfield Hills, MI 48304-2820			3729	
DATE MAILED: 10/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,360	Applicant(s) JOHNSON ET AL.	
	Examiner Tim Phan	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/7/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/15/05, 4/4/05 & 9/22/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 6 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yusuke et al (JP 7059278).

As applied to claim 1, Yusuke et al teach a method of manufacturing a stator core, including an inner stator part and an outer stator part (Fig. 1, 14 & 12), comprising:

- placing the inner stator part (Fig. 1, 14 or Fig. 2, 16) inside the outer stator part (Fig. 2, 12), and
- rotating (Fig. 3, Counter-Clock Arrow Sign) the inner stator part with respect to the outer stator part such that the inner stator part is retained with respect to the outer stator part by means of an interference fit.

As applied to claim 2, Yusuke et al teach that a clearance (Fig. 2, area 22) is provided between the inner and outer stator parts prior to relatively rotating.

As applied to claim 3, Yusuke et al teach that the inner and outer stator parts are formed from laminations in order to obtain larger thickness (Detailed Description, page 2, paragraph 26).

As applied to claim 5, Yusuke et al teach that the inner stator part includes an inner stator ring (Fig. 1, 14) from which extend radially outwardly a plurality of stator pole pieces (Fig. 1, 16), the method including winding onto the pole pieces coils (Fig. 1, 30) prior to placing the inner stator part in the outer stator part.

As applied to claim 6, Yusuke et al teach that the inner stator ring (Fig. 1, 14) is thin walled so as to provide a substantial resistance to transmission of magnetic flux from one pole to the next.

As applied to claim 8, Yusuke et al teach that the outer stator part includes a plurality of axially extending grooves (Fig. 2, area 18), one for each pole piece of the inner stator part, end surfaces of the pole pieces upon relative rotation (Fig. 3, Arrow) of the inner and outer stator parts (Fig. 3, 16 & 12), engaging with areas (Fig. 3, Area 22) of an inner wall of the outer stator part adjacent their respective grooves (Fig. 3, Area 18) as an interference fit.

As applied to claim 9, Yusuke et al teach that the end surfaces of the pole pieces and/or the areas of the inner wall with which they engage, are shaped so that as the inner and outer stator parts are relatively rotated upon assembly (Fig. 3, Arrow), the interference between the

end surfaces and the areas of the inner wall of the outer stator part (Fig. 3, 16 & 12) increases.

As applied to claim 10, Yusuke et al teach that the end surfaces of the pole pieces and/or the areas of the inner wall with which they engage include a protuberance (Fig. 3, 20) which enhances the interference fit between the pole piece end surfaces (Fig. 3, 16) and the inner wall areas (Fig. 3, 18).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yusuke et al in view of Kohler et al (US 6,634,081).

As applied to claims 4 and 11, Yusuke et al teach a method of manufacturing a stator core, including an inner stator part and an outer stator part made of laminations stacked for desired thickness (Detailed Description, page 2, paragraph 26), which reads on applicant's claimed invention, except for having at least one of the first lamination parts or outer parts being formed from material surrounding one of the second lamination parts or inner parts, or at least

one of the second lamination parts being formed from material removed from the interior of one of the first lamination parts.

Kohler et al teach a method of manufacturing core laminations with all the parts of the sheet (Fig. 7, 7) by stamping out lamination parts (Fig. 7, 2, 3 & 4) at optimized areas such as stamping the material (Fig. 7, 1) unused by first lamination part (Fig. 7, 3) to form second lamination part (Fig. 7, 2) or other (Fig. 7, 4) in order to reduce waste.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings by applying the optimized stamping of lamination parts, as taught by Kohler et al and not their general structure, to the method of manufacturing a stator core by Yusuke et al, in order to save costs and reduce waste.

As applied to claim 12, Yusuke et al teach a method of manufacturing a stator core, including an inner stator part and an outer stator part made of laminations stacked for desired thickness (Detailed Description, page 2, paragraph 26) and the rotating of the inner stator part with respect to the outer stator part (Fig. 3, Arrow) such that the inner stator part is retained with respect to the outer stator part by means of an interference fit, which reads on applicant's claimed invention, except for having at least one of the first lamination parts or outer parts being formed from material surrounding one of the second lamination parts or inner parts, or at least one of the second lamination parts being formed from material removed from the interior of one of the first lamination parts.

Kohler et al teach a method of manufacturing core laminations with all the parts of the

sheet (Fig. 7, 7) by stamping out lamination parts (Fig. 7, 2, 3 & 4) at optimized areas such as stamping the material (Fig. 7, 1) unused by first lamination part (Fig. 7, 3) to form second lamination part (Fig. 7, 2) or other (Fig. 7, 4) in order to reduce waste.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings by applying the optimized stamping of lamination parts, as taught by Kohler et al and not their general structure, to the method of manufacturing a stator core by Yusuke et al, in order to save costs and reduce waste.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yusuke et al in view of Sumi et al (US 5,134,327) or vice versa.

Yusuke et al teach a method of manufacturing a stator core, which reads on applicant's claimed invention, except for having the pole pieces provided by separate components and assembled to provide an inner stator part with an inner ring wall of non-metallic material.

Sumi et al teach a method of manufacturing a resin-molded motor with the poles pieces separated (Fig. 2b, 4') and molded together by resin material (Fig. 4b, 16; col. 2, lines 50+), in order to improve characteristics and reduce bulk (Col. 1, lines 55+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings by applying the resin-molded to the separated poles, as taught by Sumi et al, to the method of manufacturing a stator core by Yusuke et al, in order to improve characteristics and reduce bulk.

Conclusion


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M - F, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Phan
Examiner
Art Unit 3729



A. DEXTER TUGBANG
PRIMARY EXAMINER

tp
October 11, 2005